SANTA CRUZ BIOTECHNOLOGY, INC.

TTC4 (P-17): sc-160885

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The Power to Question

BACKGROUND

The tetratricopeptide repeat (TPR) motif is a degenerate, 34 amino acid sequence found in many proteins and acts to mediate protein-protein interactions in various pathways. At the sequence level, there can be up to 16 tandem TPR repeats, each of which has a helix-turn-helix shape that stacks on other TPR repeats to achieve ligand binding specificity. TTC4 (tetratricopeptide repeat domain 4) is a 387 amino acid ubiquitously expressed nucleoplasmic protein containing three TPR repeats. TTC4 localizes to the cytoplasm, however, when paired with MSL-1, TTC4 translocates to the nucleus during the G1 and S phases of the cell cycle. TTC4 interacts with HSP 90, HSP 70 and with the replication protein Cdc6 and may be associated with the progression of malignant melanoma. The gene encoding TTC4 is located on human chromosome 1, which spans about 260 million base pairs and comprises nearly 8% of the human genome.

REFERENCES

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2. Hey, Y., Brintnell, B., James, L.A. and Varley, J.M. 2000. Assignment of TTC4 to human chromosome band 1p31.3 and a pseudogene TTC4P to 7p14→p13 by *in situ* hybridization. Cytogenet. Cell Genet. 88: 272-274.
3. Su, G., Casey, G. and Cowell, J.K. 2000. Genomic structure of the human tetratricopeptide repeat-containing gene, TTC4, from chromosome region 1p31 and mutation analysis in breast cancers. Int. J. Mol. Med. 5: 197-200.
4. Poetsch, M., Dittberner, T., Cowell, J.K. and Woenckhaus, C. 2000. TTC4, a novel candidate tumor suppressor gene at 1p31 is often mutated in malignant melanoma of the skin. Oncogene 19: 5817-5820.
5. Irwin, N., Walker, G. and Hayward, N. 2002. Lack of TTC4 mutations in melanoma. J. Invest. Dermatol. 119: 186-187.
6. Moir, R.D. and Willis, I.M. 2004. Tetratricopeptide repeats of Tfc4 and a limiting step in the assembly of the initiation factor TFIIIB. Adv. Protein Chem. 67: 93-121.
7. Dmitriev, R.I., Korneenko, T.V., Bessonov, A.A., Shakhparonov, M.I., Modyanov, N.N. and Pestov, N.B. 2007. Characterization of hampin/MSL1 as a node in the nuclear interactome. Biochem. Biophys. Res. Commun. 355: 1051-1057.
8. Crevel, G., Bennett and D., Cotterill, S. 2008. The human TPR protein TTC4 is a putative Hsp90 co-chaperone which interacts with CDC6 and shows alterations in transformed cells. PLoS ONE 3: e0001737.
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STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

Genetic locus: TTC4 (human) mapping to 1p32.3; Ttc4 (mouse) mapping to 4 C7.

SOURCE

TTC4 (P-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of TTC4 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-160885 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

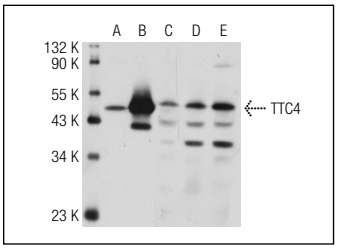
TTC4 (P-17) is recommended for detection of TTC4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other TTC family members.

TTC4 (P-17) is also recommended for detection of TTC4 in additional species, including bovine and porcine.

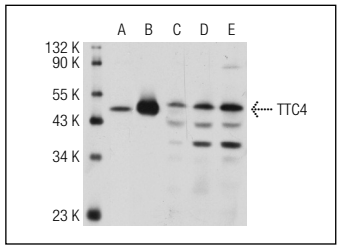
Suitable for use as control antibody for TTC4 siRNA (h): sc-88730, TTC4 siRNA (m): sc-154778, TTC4 shRNA Plasmid (h): sc-88730-SH, TTC4 shRNA Plasmid (m): sc-154778-SH, TTC4 shRNA (h) Lentiviral Particles: sc-88730-V and TTC4 shRNA (m) Lentiviral Particles: sc-154778-V.

Molecular Weight of TTC4: 48 kDa.

DATA



TTC4 (P-17): sc-160885. Western blot analysis of TTC4 expression in non-transfected 293T: sc-117752 (**A**), human TTC4 transfected 293T: sc-110551 (**B**), MCF7 (**C**), HeLa (**D**) and A-431 (**E**) whole cell lysates.



TTC4 (P-17): sc-160885. Western blot analysis of TTC4 expression in non-transfected 293T: sc-117752 (**A**), mouse TTC4 transfected 293T: sc-126162 (**B**), MCF7 (**C**), HeLa (**D**) and A-431 (**E**) whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.